



KANSAS DRUG UTILIZATION REVIEW NEWSLETTER

Health Information Designs, LLC

4th Quarter 2019

Welcome to the Quarterly edition of the "Kansas Drug Utilization Review Newsletter", published by Health Information Designs, LLC (HID). This newsletter is part of a continuing effort to keep the Medicaid provider community informed of important changes in the Kansas Medical Assistance Program (KMAP).

Helpful Web Sites

KMAP Web Site

<https://www.kmap-state-ks.us/>

KDHE-DHCF Web Site

<http://www.kdheks.gov/hcf/>

KanCare Web Site

<http://www.kancare.ks.gov/>

Fee-For-Service (FFS)

Helpful Numbers

Provider Customer Service (Provider Use Only)

1-800-933-6593

Beneficiary Customer Service

1-800-766-9012

KMAP PA Help Desk

1-800-285-4978

In This Issue:

Importance of Medication Reconciliation

E-cigarette, or Vaping, Associated Lung Injury (EVALI)

Medication Reconciliation

Medication reconciliation, also known as a "med rec", plays an essential role in transitional care and is the process of identifying a patient's most up-to-date medication list. It is commonly completed by comparing the list with any existing medical record. This can be completed by any medical professional, such as a physician, nurse, or pharmacist. There are several situations where a med rec is crucial to patient care: a) there may be a lack of communication or dialogue between patients and providers that results in discordance in medication regimens, b) many patients are on complex drug regimens, c) functionally limited or a lack of transitional care programs, and d) as new medications are presented to the pharmaceutical market, patients are commonly discontinuing their current regimens and trying different agents within the same class or even those with similar outcomes in other classes.

Because a patient may forget to mention a specific medication, a current list of medications should be reviewed during each medical visit. Any new prescriber involved with the patient's care should obtain a list of medications that the patient is currently taking, which is usually the standard of care when providers take on new patients. Additionally, all prescribers should be updated when the patient sees a new prescriber, which can include, but is not limited to, visits to the emergency department (ED), inpatient hospitalizations, referral to a new specialist, and/or urgent care visits. After a consultation with a specialist, the specialist may be the one to update the primary care provider. After changes to medications are made following an ED and/or hospitalization, the patient may be the main or only source to update his/her providers.

Medication reconciliation is key to identifying medication related problems (MRPs). Examples include:

- **Insufficient dosing.** A physician may increase a patient's dosage and the patient is expected to discontinue an older strength. In this situation, the pharmacy may have an active prescription for an older strength. This opens up the possibility to mistakenly fill the outdated prescription. If the medication dosage was increased, and the patient continued the lower strength, he/she could experience a subtherapeutic response.
- **Duplicate therapy.** A physician may change the patient's medication. For example, if a patient's anti-hypertensive treatment plan involved replacing an ineffective medication with another but the patient continues to use both, therapy duplication may result. Consequently, the patient may be more prone to drug related adverse events.
- **Adverse drug reaction (ADR).** If the new medication presents a drug interaction with an existing medication, the risk of adverse drug reactions (ADRs) are increased. When action is not taken to mitigate the risk of or identify ADRs, patient compliance can be affected and/or harm can result. Occasionally, the addition of another agent would require a dosage adjustment or more frequent monitoring.

Medication Reconciliation, cont.

A commonly overlooked entity that should be involved in the medication reconciliation process is the outpatient pharmacy in which the patient fills prescriptions. Following a change in drug therapy, the new prescription should state to discontinue the prior medication. This is an additional step to ensure all involved in the process have the most updated information. By including this on the prescription, the pharmacy is informed of the change and can inactivate the outdated prescription, preventing the old drug or strength from continuing to be filled. Providing notes on the labels of new prescriptions to inform patients of drug therapy changes is also a common practice in community pharmacies to promote appropriate drug use and transparency between providers and patients.

Medication reconciliations play an essential role in helping patients navigate through an exceedingly complex healthcare system and provide opportunities for providers to optimize drug regimens. Medication reconciliation, additionally, may have a fiscal impact by reducing unnecessary drug therapy, over-utilization, and/or medical visits caused by ADRs and MRPs.

E-cigarette, or Vaping, Associated Lung Injury (EVALI)

Current smoking has declined from 20.9% (nearly 21 of every 100 adults) in 2005 to 13.7% (nearly 14 of every 100 adults) in 2018.¹ Despite recent drops in prevalence, smoking continues to be an epidemic and can lead to several preventable health complications including, but not limited to, respiratory disease, cardiac disease, and cancer. The harmful effects of tobacco are well known and documented. Initially, e-cigarettes, also known as vapes or e-cigs, were marketed as a smoking cessation alternative by providing the sensation of smoking and nicotine without the harmful tar and other chemicals. E-cigarettes are electronic devices that typically heat up a liquid form of nicotine and produce a “smokeless” vapor. Vaping has gained popularity quickly and there are over 15,000 vaping products available on the market.

Upon introduction, the vaping market was not well studied or regulated. Now that e-cigarettes have gained in popularity, there have been evident and prominent reports of lung complications. EVALI refers to any vaping-related illness, including respiratory symptoms such as cough, chest pain, and shortness of breath, and gastrointestinal symptoms including abdominal pain, nausea, vomiting, and diarrhea.^{2,3} As of November 20, 2019, there are 2,290 cases of e-cigarette or vaping product associated lung injury reported from 49 states, D.C., and the U.S. Virgin Islands and 47 people have died from this condition.² E-cigarettes may contain vitamin E acetate, which can be used as a diluting or thickening agent. Vitamin E acetate is a common vitamin found in foods, supplements, and cosmetic products and does not cause harm when swallowed or applied topically.³ Although there are other possible compounds or ingredients that may contribute to the cause of EVALI, inhaled vitamin E acetate may interfere with normal lung function.³ The mechanism by which Vitamin E acetate may cause EVALI is unclear; however, 29 bronchoalveolar lavage (BAL) fluid samples submitted to the Centers for Disease Control and Prevention (CDC) all contained vitamin E acetate at the primary site of injury.^{2,3} Despite the culprit causing EVALI, vaping products clearly contain a harmful substance. These products remain difficult to regulate, as vaping black-market products are constantly introduced.

Healthcare providers are encouraged to report possible cases of EVALI to their local or state health department while the FDA and CDC continue their investigation into e-cigarettes.⁴

The FDA has proposed a rule that would require manufacturers to establish their tobacco products are legally marketed. A federal judge has ordered that all manufacturers of e-cigarettes to submit to federal review by May 2020.⁶

EVALI IN KANSAS

As of November 22, 2019, two confirmed vaping-related deaths have occurred in Kansas and there are 21 other probable vaping related cases. In a 2017 Youth Risk Behavior Survey, statistics show that 34.8% of Kansas high school students have tried e-cigarettes at least once and 10.6% routinely vape. Additionally, the 2017 Kansas Behavioral Risk Factor Surveillance System reports 4.6% of Kansas adults use e-cigarettes. Governor Laura Kelly provided a statement to mobilize KDHE to combat e-cigarette epidemic on September 23, 2019 and can be accessed at <https://governor.kansas.gov/governor-mobilizes-kansas-department-of-health-and-environment-to-combat-e-cigarette-epidemic-amid-2nd-kansas-death/>. More information and resources are available on the KDHE website at <http://www.kdheks.gov/vaping/index.htm>, which includes a testimony to Congress from Dr. Lee Norman, KDHE Secretary and Kansas State Health Officer, and a hearing on September 25, 2019 to address the public health threats of e-cigarettes.

E-cigarette, or Vaping, Associated Lung Injury (EVALI), cont.

EVALI is a diagnosis of exclusion because, at present, no specific test or marker exists for its diagnosis. Clinical evaluation, follow-up, and sample testing for patients with suspected EVALI is provided below.

Clinical Evaluation ^{4,5}

Patient History

- *Symptoms:* Patients initially experienced respiratory symptoms (e.g., cough, chest pain, and shortness of breath), gastrointestinal (e.g., abdominal pain, nausea, vomiting and diarrhea), and constitutional symptoms (e.g., fever, chills and weight loss)
- *Products used:* types of substances used (e.g., THC, cannabis [oil, dabs], nicotine, modified products or the addition of substances not intended by the manufacturer); product source, specific product brand and name; duration and frequency of use, time of last use; product delivery system, and method of use (aerosolization, dabbing, or dripping)

Physical Examination

- Vital signs (tachycardia, tachypnea) and oxygen saturation via pulse oximetry (O₂ saturation <95%)
- Pulmonary findings on auscultation exam have often been unremarkable, even among patients with severe lung injury

Laboratory Testing

- Rule out infectious diseases
- Urine toxicology testing, including testing for THC

Imaging

- Radiographic findings consistent with EVALI include pulmonary infiltrates on chest radiograph (CXR) and opacities on chest computed tomography (CT) scan

Follow-up ^{4,5}

- *Patients Not Admitted to Hospital:* Follow-up within 24–48 hours to re-assess and manage possible worsening lung injury
- *Post-Hospital Discharge Follow-Up:* Schedule follow-up visit no later than 1–2 weeks after discharge that includes pulse-oximetry testing. Consider additional follow-up testing including spirometry and diffusion capacity testing and consider repeat CXR in 1-2 months.
- Strongly advise patients to discontinue use of e-cigarette, or vaping, products. For those dependent on nicotine, refer to smoking cessation recommendations and guidelines.

Public Health Clinical and Product Sample Testing ^{4,5}

- If a bronchoscopy is performed, consider submitting Bronchoalveolar Lavage (BAL) fluid to the CDC through state public health laboratories and the health department.
- If a lung biopsy or autopsy is performed, consider submitting fixed lung biopsy tissues or autopsy tissues to the CDC for evaluation.

References

1. Current Cigarette Smoking Among Adults in the United States. Centers for Disease Control and Prevention. 18 November 2019. Accessed 10 December 2019. Available at: https://www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/cig_smoking/index.htm
2. Outbreak of Lung Injury Associated with the Use of E-Cigarette, or Vaping, Products. Centers for Disease Control and Prevention. 21 November 2019. Accessed 2 December 2019. Available at: https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html.
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Generic Medications

Recently Approved Generic Drugs:

| August 2019 | September 2019 | October 2019 |
|--|------------------------------|--|
| Carfilzomib injection (Kyprolis®) Fosaprepitant injection (Emend®) Ivermectin cream (Soolantra®) | Vilazodone tablet (Viibryd®) | Dapsone topical gel (Aczone®) Nitisinone capsule (Orfadin®) Posaconazole tablet (Noxafil®) |

Upcoming Generic Drugs:

| Generic Name | Brand Name | Anticipated Launch |
|--|--|--------------------|
| Doxepin Hydrochloride | Silenor® | January 1, 2020 |
| Insulin Aspart Recombinant | Novolog (10 mL vial), Flexpen, Penfill® | January 2, 2020 |
| Insulin Aspart Protamine Recombinant, Insulin Aspart Recombinant | Novolog Mix 70/30 (10 mL vial), 70/30 Flexpen® | January 2, 2020 |

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